

EARLY HEAD START RESEARCH AND EVALUATION PROJECT

Child-Parent Interaction Rating Scales for the Three-Bag Assessment
14-Month Wave

Anne M. Ware, Christy L. Brady, Claudia O'Brien, Lisa Berlin, & Jeanne Brooks-Gunn

© 1998, National Center for Children and Families
Teachers College, Columbia University
525 W 120th St., Box 39
New York, NY 10027
Website: nccf.tc.columbia.edu

Final Revision: July 12, 2000

BACKGROUND

The Three-Bag Assessment was one of three activities parents and children completed as part of a 30-minute set of parent-child interactions videotaped in the home. During the task, the dyad was asked to play with three different sets of toys, each placed within a separate bag labeled "1," "2," or "3." The parent was told that s/he had 10 minutes to play with the three toys and that the only restriction was that they play with the toys in numerical order, beginning with bag #1 and ending with bag #3. For more detailed information on the Three-Bag protocol, see the video protocol manual available online:

http://www.acf.hhs.gov/programs/opre/ehs/ehs_resrch/instruments/videobooklet_14month/videotaped_booklet_14months.pdf

The present scales were adapted under the supervision of Jeanne Brooks-Gunn at the National Center for Children and Families, Teachers College, Columbia University. They are based on the NICHD Study of Early Child Care *Mother-Child Interaction Rating Scales* for the Three Boxes Procedure (Owen, Norris, Houssan, Wetzel, Mason, & Ohba, 1993) and on the *Manual for Coding Freeplay - Parenting Styles* from the Newark Observational Study of the Teenage Parent Demonstration (TPD; Brooks-Gunn, Liaw, Michael, & Zamsky, 1992; Spiker, Ferguson, & Brooks-Gunn, 1993). Additional input was obtained from researchers from the Infant Health and Development Program (IHDP; Spiker, Ferguson & Brooks-Gunn, 1993) and the Baltimore Study (Chase-Lansdale, Gordon, Coley, Wakschlag & Brooks-Gunn, 1999; Chase-Lansdale, Brooks-Gunn, & Zamsky, 1994). In developing these scales, content from the NICHD and TPD scales were revised to fit the Early Head Start Three-Bag Assessment and population. To train research assistant-coders, a training videotape was developed containing exemplars of high, medium and low scoring interactions along each scale. Coders reached 85% agreement or higher with a "gold standard" before coding unique interactions. Fifteen percent of all tapes assigned thereafter were used to check coders' ongoing reliability. For more detailed information on the psychometrics and background information of the Three-Bag assessment, see:

http://ehs.xtria.com/studies/national_eval_report/rating_scales/3bag_description_final_42905.doc

I. SCALES FOR PARENT'S BEHAVIOR

- A. Parental Sensitivity
- B. Parental Intrusiveness
- C. Parental Stimulation of Cognitive Development
- D. Parental Positive Regard
- E. Parental Negative Regard
- F. Parental Detachment

II. SCALES FOR CHILD'S BEHAVIOR

- A. Child Engagement of Parent
- B. Child's Sustained Attention with Objects
- C. Child Negativity Toward Parent

III. DYADIC SCALE: Mutuality/Connectedness

IV. REFERENCES

V. ACKNOWLEDGMENTS

I. SCALES FOR PARENT'S BEHAVIOR

A. Parental Sensitivity

This scale focuses on how the parent observes and responds to the child's cues (gestures, expressions, and signals) during times of distress as well as non-distress. The key defining characteristic of sensitivity is that it is child-centered. Sensitive parenting involves "tuning in" to the child and manifesting awareness of child's needs, moods, interests, and capabilities.

A parent displaying sensitivity structures the child's physical and social environment so that the child has interesting options for play, so that the child's preferences can be honored within reason, and so that the child can remain effectively engaged in playful or goal-directed activity. Sensitive parenting is also characterized by frequent praise and encouragement, withholding criticism, and balancing both the giving of support and encouraging of independent exploration so that the child can experience success, pride, and develop effective self-regulation skills.

At 14 months, the child may display his/her emerging need for autonomy, control, independence, and mastery. The need for autonomy and control can be seen when the child tries to do things in his/her own way. The need for mastery is seen when the child explores and manipulates objects in the environment. Sensitive parenting involves responding to these needs and to the child's own "agenda." Needs for dependency on the parent are prominent, yet struggles between needs for dependency and needs for autonomy may be emerging. Sensitive parenting involves being flexible in supporting and responding to the opposing desires that can be present simultaneously in the child.

Parental sensitivity permits the child as much choice, control, and autonomy as possible even while enforcing necessary rules, regulations, and constraints. An interaction with a sensitive parent is well-timed and paced to the child's responses, a function of its child-centered nature. Such interactions generally appear to be "in sync." If the child initiates interaction with the parent or makes demands, desires, or requests, sensitive behaviors include responding to the child's behavior and speech and pacing activities to keep the child engaged and interested. For example, if the child doesn't want to read the book, the parent might suggest looking in the next bag and coming back to the book later. A parent displaying sensitivity allows the child to disengage when interest is lost and, generally, to shape the interaction. It is important to recognize, however, that parental sensitivity to the child's interests typically **maximizes** engagement and interest.

If the child is interested and involved with toys, a parent displays sensitivity by allowing the child to explore independently, yet "checking in" with the child visually to show that s/he is actively taking an interest in the child's activities. Sensitive parenting can also be displayed by offering a new activity or suggestion for play in a way that acknowledges and/or respects the child's ongoing activity (e.g., offering a toy and waiting for the child's response, taking turns, extending what the child is already doing).

If the child appears disengaged, sensitive parenting involves taking time to re-engage the

child in a manner that demonstrates awareness of and sensitivity to the child's mood and preferences for play style and content. For example, if the child is uninterested, the parent may show new combinations of the toys, new activities, or other engaging opportunities. Alternatively, the parent may help the child make the transition to a new activity.

Indicators of Sensitivity:

- Acknowledging the child's affect; Sensitivity to distress, anger or frustration may involve speaking sympathetically to the child, approaching the child, redirecting the child's activities, hugging, patting, picking up, or holding the child in lap and rocking
- Responsiveness to the child's vocalizations and/or activity
- Facilitating (but not over-controlling) the child's play
- Changing the pace when the child appears under-stimulated, overexcited, or tired
- Picking up on the child's interests and timing activities to reflect the child's interest
- Changing from one toy bag to another in a way that acknowledges the child's activity
- Matching the child's affect (e.g., increasing or decreasing expression as the child does so)
- Providing an appropriate level of stimulation and appropriate range and variety of activities
- Gentle and patient handling of the child's off-task behavior
- When the child is not making bids, the parent allows the child to keep him/herself busy and also "checks in" visually
- Demonstrating developmentally appropriate expectations of child behavior

Indicators of Insensitivity:

- Ignoring the child
- Responding in a listless manner, or with developmentally inappropriate comments and behavior
- Overstimulating and intrusive interactions (e.g., continuing in attempts to engage the child even when the child is providing clues that s/he is seeking to end the interaction or desires to play autonomously)
- Excessive prohibitions
- Inappropriate discipline

Ratings on this scale should be based on both *quantity* and *quality* of parental behavior.

Parental Sensitivity Scale:

1. **Very Low Sensitivity.** Interactions are characteristically adult-centered and/or the parent is unavailable and un-responsive to the child's signals, moods, interests and needs.
2. **Low Sensitivity.** There is little evidence of parental sensitivity. Most of the interaction is adult-centered and/or the parent is mostly not contingently responsive.
3. **Moderately Low Sensitivity.** Parent displays infrequent and/or weak indicators of sensitivity. While the parent is sometimes sensitive, the balance is in the direction of insensitivity.
4. **Moderate Sensitivity.** The frequency and quality of the parent's sensitivity and insensitivity are about equal. It is this inconsistency which prevents the parent from receiving a higher rating.
5. **Moderately High Sensitivity.** Parent displays more sensitivity than not. The parent demonstrates sensitivity in many interactions, but may show some insensitivity.
6. **High Sensitivity.** Parental behavior is characterized by sensitivity but the parent may show minimal insensitivity by hesitating to respond to distress, "missing" a signal from the child or missing an opportunity to praise the child.
7. **Very High Sensitivity.** Parent is very sensitive and responsive throughout the interaction. Insensitivity is never striking. Interactions are the child-centered. Parent praises the child.

B. Parental Intrusiveness

This scale reflects the degree to which the parent exerts control over the child rather than acting in a way that recognizes and respects the validity of the child's perspective. Intrusive interactions are clearly adult-centered rather than the child-centered. Extreme intrusiveness can be seen as over-control to the point where a the child's autonomy is at stake. When unsure whether a behavior is intrusive or not, focus on the *perspective of the child*.

Intrusive behaviors involve imposing the parent's agenda on the child despite signals that a different activity, level or pace of interaction is needed. High arousal, vigorous physical interaction or a rapid pace are not in and of themselves indicative of intrusive over-stimulation - if the child responds positively and is not engaging in defensive behaviors. It is when the child averts his/her gaze, turns away, or expresses negative affect *and the parent continues or escalates* that the behavior is intrusive. Intrusiveness is also apparent when the parent persists in demonstrating a toy to the child long after the child's interest has been gained and the child clearly wants to manipulate the toy him/herself. These parents appear unable to relinquish control of the interaction in order to facilitate the child's exploration or regulation of the activity. Intrusiveness may also be displayed by overwhelming the child with a rapid succession of toys or suggestions, without allowing the child time to react to one before another occurs.

In contrast, a parent scoring low on this scale acknowledges the child's perspective. This parent allows the interaction to be the child-centered rather than adult-centered. The parent modulates her/his behavior in response to the child's interest and enjoyment and allows the child to explore and play at his/her own pace.

Keep in mind that a parent can become involved in the child's play without denying his/her autonomy or being intrusive. In addition, parental actions which are clearly in the child's best interest, such as removing the child from danger are not considered intrusive. Likewise, parental behaviors that are in accordance with protocol instructions, such as bringing a the child back to the mat or turning the child toward the camera, will not be judged as intrusive unless the child is handled in a rough or perfunctory manner.

Indicators of Intrusiveness:

- Persisting with an action that clearly does not interest the child (e.g., parent continues with a behavior that makes the child turn away, act defensive, or express negative affect)
- Offering a continuous barrage of stimulation or toys
- Not allowing the child to influence the focus or pace of play
- Not allowing the child to handle toys that he/she reaches for
- Grabbing toys away even though the child is still interested
- Not allowing the child a turn or an opportunity to respond at his/her own pace
- Not allowing the child to make choices
- Poking the child with toys, fingers, or other object(s)

Ratings on this scale should be based on both *quantity* and *quality* of parental behavior.

Parental Intrusiveness Scale:

1. **Very Low Intrusiveness.** No signs of intrusive behavior are observed. Child does not respond defensively in any way to parental behavior.
2. **Low Intrusiveness.** Parent displays almost no signs of intrusive behavior. Only a few instances of intrusive behavior are observed, but they are brief and do not unreasonably shift the child's perspective (e.g., slightly abrupt bag transition, briefly taking a toy, or brief page-turning conflict).
3. **Moderately Low Intrusiveness.** Parent displays minimal intrusiveness. Parent may initiate some interactions with child or offer suggestions to child which are not welcome (e.g., abruptly introducing a new activity/toy when the child is clearly enjoying a different activity/toy), evidenced by child protesting or responding defensively to parent. Or, parent may continue her/his activity after child responds defensively, but parent does not *escalate* the activity (e.g., the parent continues to stir with spoon after the child has pushed the parent's hand away; *NOTE: escalating* the behavior would be insisting that the child stir with spoon or *increasing* demands that the child engage in a behavior).
4. **Moderate Intrusiveness.** Parent displays intrusiveness throughout half the session. Intrusiveness is somewhat characteristic of the interaction. Parent may intrude abruptly on the child a few times or show mild intrusiveness at several points in the interaction.
5. **Moderately High Intrusiveness.** Parent is more intrusive than not. Intrusiveness occurs regularly throughout the interaction and the child has little opportunity to do anything on his/her own.
6. **High Intrusiveness.** Parental intrusiveness is pervasive to the point that it characterizes the *style* of the parental interaction with the child. Parent strongly denies the child an opportunity to do anything on his/her own. The child may have a few opportunities to experience autonomy, whether by variation in the parent's approach or simply by occasional absence of parental control. Mostly, however, this parent practices an intrusive style.
7. **Very High Intrusiveness.** Parental style is so intrusive that it is worrisome. Parent is very intrusive, physical and/or forceful in controlling the child. Most of the session is marked by the parent completely controlling the interaction and allowing the child almost no self direction in his/her activities.

C. Parental Stimulation of Cognitive Development

The focus of this scale is on the parent's effortful teaching to enhance perceptual, cognitive, and linguistic development. A parent stimulating cognitive development is aware of the child's developmental level and aims to bring the child above that level. If the topic or method of stimulation is not matched or slightly above the child's developmental level or interest, then the parent's behavior is not seen as stimulating cognitive development.

A parent may take advantage of any activity to stimulate cognitive development. S/he may engage in a variety of activities with the intent to facilitate learning, development and achievement. A parent scoring high on this scale provides frequent stimulation through explanations, activities, or toys. S/he provides rich stimulation in terms of language, and embellishment of the potential of the physical world.

Listed below are examples of cognitive stimulation that can be considered (a) minimally stimulating (i.e., age appropriate, but not stimulating the child to a higher level of understanding), (b) moderately stimulating (i.e., stimulating the child to a slightly higher level of understanding), and (c) highly stimulating (i.e., clearly stimulating the child to a higher level of understanding).

Minimally Stimulating:

- Attempting to focus the child on an object or task;
- Labeling the attributes of objects (i.e., their colors, the names of animals);
- Verbally responding to the child.

Moderately Stimulating:

- Suggesting more sophisticated play activities (e.g., "why don't you try...") and encouraging the child's attempts at mastery;
- Labeling and interpreting the child's experiences, (e.g. "You think that's funny");
- Labeling actions (i.e., "Yes, you can stir with the spoon," or "The baby is jumping on the bed!");
- Stimulating the child's language development by expanding on his/her vocalizations;
- Describing or asking questions about toys or objects, or demonstrating how they work;
- Giving the child an opportunity to experiment with materials that illustrate or teach concepts (e.g., lining up animals two-by-two; grouping colors or food);
- Modeling, but not engaging in, pretend play (e.g., parent pretends to feed the child make-believe food but doesn't elaborate on what it is they are pretending; or, parent tells the child to make dinner, but doesn't join in the play)

Highly Stimulating:

- Encouraging **and** engaging in pretend play (e.g., encouraging and joining in with the child in pretending to cook dinner with the kitchen set);
- Presenting activities in an organized sequence of steps ("OK, first we have to turn on the oven, then we're going to put some water in the pot, then we'll put the food in, then...");
- Elaborating on the pictures and actions in the book or unique attributes of objects;
- Relating play activity or book to the child's experience ("Look, it's a doggie just like grandma's doggie");

High scores are given to parents who use techniques found in all three categories and who clearly show that the primary intent of their interactions with the child is teaching or fostering cognitive development. Parents who engage almost exclusively in the lower level behaviors associated with cognitive development at this age would not be given the highest scores.

Physical activities, such as rough and tumble play, tickling, and bouncing are not considered to stimulate cognitive development, nor are those activities that are only social (hugging or smiling) or caretaking (soothing).

Ratings on this scale should be based on both *quantity* and *quality* of cognitive stimulation provided by the parent.

Parental Cognitive Stimulation Scale:

1. **Very Low Cognitive Stimulation.** The parent provides no cognitive stimulation. No attempt is made to teach the child anything or to provide any cognitive stimulation. Parent is either totally uninvolved or fails to provide any information about the toys or situation.
2. **Low Cognitive Stimulation.** Parent provides infrequent or weak cognitive stimulation. The parent displays few conscious or purposeful attempts to engage in development-fostering experiences, or any stimulation s/he provides is not matched to the child's interest or ability.
3. **Moderately Low Cognitive Stimulation.** Parent provides some cognitive stimulation with some of the toys, or minimal-level cognitive stimulation, but most of the interaction is not characterized by cognitive stimulation that is suited to the child's interest or ability.
4. **Moderate Cognitive Stimulation.** Parent provides cognitive stimulation during much of the session, but overall does not engage in behaviors that stimulate a higher level of cognitive development in the child. Parents with this rating may label and point out features of the toys or may *model* pretend play, but no clear attempts to elaborate or teach are observed.
5. **Moderately High Cognitive Stimulation.** Parent provides cognitive stimulation throughout the session, some of which stimulates a higher level of mastery or sophistication, but there are some periods in which it is infrequent and does not exhibit features of the higher scores. This rating should be given to parents who are characteristically stimulating, but could provide more frequent and/or higher quality stimulation. Parent may attempt to *engage* the child in pretend play, but the efforts are either unmatched to the child's interest or ability or are not as stimulating as those found in parents rated "6."
6. **High Cognitive Stimulation.** Parent clearly seeks to stimulate a higher level of mastery, understanding or sophistication and does so during most of the session. Efforts to engage in pretend play must be evident.
7. **Very High Cognitive Stimulation.** Parent clearly seeks to stimulate a higher level of understanding, or sophistication (i.e., trying to engage in pretend play) and does so consistently throughout the session.

D. Parental Positive Regard

This scale taps the parent's expression of love, respect and/or admiration for the child. Positive regard is evident in the way(s) in which when the parent listens, watches attentively and looks into the child's face when talking to him/her. Parents who give praise without a warm tone as well as those who fail to praise when the opportunity presents itself, would not receive the highest score. "Thank you," is considered a low level indicator of positive regard unless it is also accompanied by other indicators of positive regard (e.g., saying 'thanks' in a warm tone and smiling or hugging the child rather than just saying 'thanks' with relatively flat affect).

Indicators of Positive Regard:

- Speaking in a warm tone of voice
- Hugging or other expressions of physical affection
- Smiling or laughing with the child
- Enthusiasm about the child
- Praising and/or complimenting the child
- Clear enjoyment of the child
- Showing concern and/or empathy for the child's distress

Ratings on this scale are based on both *quantity* and *quality* of positive regard. It is important to note that positive regard is not necessarily the absence of negative regard, so a parent scoring high on positive regard may also exhibit negative behaviors (which would be coded under Parental Negative Regard).

Parental Positive Regard Scale:

1. **Very Low Positive Regard.** Parent displays no positive regard.
2. **Low Positive Regard.** Parent displays almost no positive regard. One or two fleeting instances of positive regard may be observed. These positive expressions (laughing, smiling), however, appear to be inappropriate to the situation or an inaccurate expression of parent's feeling. The parent may be expressionless, flat or negative.
3. **Moderately Low Positive Regard.** Parent displays infrequent and/or weak signals of positive regard. The intensity and frequency of positive regard are low.
4. **Moderate Positive Regard.** Parent displays some positive regard, but it is not predominant in the interaction. There may be signs of general enjoyment, warmth, and positive expressions but they are neither intense nor frequent. This parent may be positive to the child, but the parent gives no direct praise (or weak praise) or rarely retains eye contact with the child.
5. **Moderately High Positive Regard.** Parent frequently displays positive regard, which may include some praise of the child, or consistent, clear enjoyment of the child.
6. **High Positive Regard.** Parent frequently displays positive regard and praise. Some of these expressions are clearly enhancing of self-esteem and directed to the child's behavior or

individual attributes/qualities.

7. **Very High Positive Regard.** Parent is very positive throughout the session in terms of facial and vocal expressiveness and behavior. Affect is positive and spontaneous. The parent shows a range of expressions and behaviors which are all clearly positive. The parent's consistent expressions of positive regard are clearly enhancing of the child's self esteem.

E. Parental Negative Regard:

This scale reflects the parent's expression of discontent with, anger toward, disapproval of, and/or rejection of the child. When scoring negative regard, focus on the parent's negative behaviors toward the child. Although the parent's positive behaviors are likely to be related to the parent's negative behaviors, it is not necessary to weigh the parent's positive behaviors (these are captured in the Positive Regard scale).

A parent scoring high on this scale clearly and overtly rejects the child, is physically rough, and/or otherwise explicitly indicates that s/he does not support the child emotionally. A parent scoring low on this scale may be supportive *or* devoid of emotion, but does not blame or express disregard for or anger toward the child. Given the low frequency and the clinical relevance of rejecting one's the child during a videotaped session, any events which are clearly hostile should be weighed strongly in this score. More subtle behaviors (e.g., sigh of frustration, cold looks) can lead the coder to rate negative regard anywhere from a "2" to a "5" depending on the intensity and frequency of the behaviors.

Indicators of Negative Regard:

- Disapproving and/or negative voice
- Signs of frustration (e.g., sighs, rolling eyes)
- Cold looks toward child
- Snappish responses to the child's bids
- A sense of underlying exasperation and/or frustration
- Harsh vocalizations and/or verbalizations (e.g., "Shut up!" "Get back on the mat right now!")
- Physical roughness with the child (e.g., yanking the child's arm; slapping or hitting the child)
- Abruptness with the child (e.g., curt, business-like comments without eye contact)
- Tense body, facial muscles, or strained expression
- Threatening posture or punitive behavior (e.g., looming over the child in a menacing way; "If you don't get over here right now, I'm going to get you.")
- Threatening the child (verbally or physically) for failing at a task or for not interacting with the toys in the way the parent desires (e.g., "If you don't start trying harder, I'm going to put all of the toys away")
- Teasing the child
- Setting the child up for failure
- Calling the child unflattering names or belittling the child's efforts

Ratings on this scale are composed of both *qualitative* and *quantitative* evaluations. The amount and intensity of negative regard exhibited is evaluated in relation to the duration of the observation period.

Parental Negative Regard Scale:

1. **Very Low Negative Regard.** Parent shows no signs of negative regard. The parent may or may not be supportive, but does not derogate or reject the child. A passive or emotionally uninvolved parent would be given this score if s/he does not display behaviors indicative of negative regard. No signs of subtle negative behaviors (cold looks, sighs of frustration) are noted.
2. **Low Negative Regard.** Parent conveys some negative regard once or twice, or through muted forms of negativity (e.g. pulling away, pulling something away from the child with a jerk, brief displays of exasperation, looking at the child coldly for a brief time, teasing with a negative content but with accompanying humor or warmth, parroting or mimicking the child). Or, parent shows a diffuse level of discontent, discomfort, or boredom, not necessarily directed at the child.
3. **Moderately Low Negative Regard.** Parental signs of negative regard are fleeting but occur on several occasions during the session (either one behavior is identified as clear and overt *or* a sense of accumulating unexpressed negativity or anger toward the child is seen in the parent's behavior). The general interaction, however, is not characterized by negative regard.
4. **Moderate Negative Regard.** Parent displays several instances of frustrated or rejecting behaviors. Two or more of these events are overt, but negative expressions are brief and do not set the tone of the parent's behavior.
5. **Moderately High Negative Regard.** Parent exhibits overly exasperated, negative, or hostile behavior several times. Overt and clearly communicated negative expressions of hostility or anger appear intermittently throughout substantial periods of the session. Parental behavior is more negative than not, either by the frequency of hostile behavior and/or by the intensity of these behaviors.
6. **High Negative Regard.** Parent frequently expresses rejection and hostility toward the child. There are little or no displays of warmth during substantial portions of the session, especially after parent becomes irritated with the child (i.e., parent may initially be warm and then reject the child strongly). Parent is frankly and directly rejecting and hostile (e.g., using negative performance feedback but little positive feedback; blaming the child for failure (e.g., "Look, now you broke the stove."); overtly refusing to recognize the child's success (e.g., "You couldn't have done it without me showing you!"). Physical roughness, threatening and/or punitive comments and/or behaviors may be noted.
7. **Very High Negative Regard.** Parental behaviors are strongly characterized by negativity. Parent shows characteristics of the previous scale point, but expressions of anger toward the child also are accompanied by strong, barely controlled emotions, suggesting the possibility of physical abuse and neglect of the child in some situations. Physical roughness, threatening and/or punitive comments and/or behaviors may be noted.

F. Parental Detachment

This scale measures the parent's awareness of, attention to, and engagement with the child. This includes both the extent to which the parent interacts with the child (i.e., quantity of interaction) and the way in which the parent interacts with the child (i.e., quality of interaction). Detachment can take the form of being consistently inattentive, being inconsistently attentive, and/or interacting with the child in a perfunctory or indifferent manner.

A parent behaving in a detached manner does not react contingently to the child's actions or vocalizations (or rarely speaks to the child) and does not facilitate the child's exploration. There is little joining in the child's play. Parents displaying detachment may "miss" the child's looks to them, vocalizations to them, or other cues that call for parent attention. When a parent displaying detachment does interact with her/his the child, the timing is out of sync with the child's affect and responses.

Simply allowing the child to play by him/herself is not necessarily a sign of detachment. Such behavior can be appropriate at times, such as when the child is playing happily or contentedly and the parent "checks in" with the child visually. A parent behaving in a detached manner lacks emotional involvement with the child and appears uninterested in the child and his/her activities. Parents acting detached may pay greater attention to the toys or to other people. Or, they may play with the toys, but are more likely to engage in parallel play rather than interact with the child.

Indicators of Detachment:

- Flat affect
- Rarely making eye contact
- Not talking to the child
- Not responding to the child's vocalizations, smiles or other cues for attention
- Lack of emotional responsiveness to the child's bids or expressions (e.g., the parent does not smile in response to the child making eye contact and smiling at the parent)
- Presenting toys without first engaging the child or showing him/her how to manipulate them
- Ignoring or being unaware of the interesting things the child does

If the parent does look at the child, the following are indicators of visual detachment:

- Briefness of looking
- Blank, indifferent staring
- Delay(s) in looking

If the parent does speak to the child, the following are indicators of verbal detachment:

- Listless, monotonic, emotionless tone
- Short, clipped responses; business-like, to-the-point speech; not using the child's name
- Speaking without looking at the child; speaking while looking indifferently or "through" the child; only giving a perfunctory glance while speaking

This scale consists of both *qualitative* and *quantitative* components. When scoring

detachment, it is particularly important to consider the rate, intensity, and valence of the infant's affective signals. It is especially important to realize that unresponsiveness to infant distress is an indication of greater detachment than is unresponsiveness to positive bids. Likewise, parental detachment when the infant is sending many or intense signals is scored higher than when the infant is relatively quiet and content. Even when a child makes no bids to the parent, however, a parent who is not detached must display at least some attention toward the child (e.g., looking at child, smiling in child's direction, talk to child).

Parental Detachment Scale:

1. **Very Low Detachment.** Parent shows no signs of detachment. When interacting with the child, the parent is clearly emotionally involved. The parent may be behaving in a sensitive or intrusive manner.
2. **Low Detachment.** Parent displays almost no signs of detachment. The parent may briefly display indicators of mild detachment (e.g., may seem to "check out" for a very brief time or occasionally may "miss" some of the child's cues due to momentary lack of emotional involvement).
3. **Moderately Low Detachment.** Parent displays minimal detachment. Parent is sometimes uninvolved, but is clearly more involved than not.
4. **Moderate Detachment.** Parent displays a mixture of involvement and detachment. The parent may have a prolonged period of detachment, but the rest of the session is characterized by involvement. Or, parent may have several short periods of detachment separated by periods of involvement.
5. **Moderately High Detachment.** Parent displays significant detachment. Although the parent is sometimes involved, s/he is clearly more detached than not during the interaction.
6. **High Detachment.** Parent is detached throughout most of the interaction. The parent's "style" of interaction can best be characterized by detachment. Periods of parental involvement are infrequent and/or weak.
7. **Very High Detachment.** Parent is so detached that almost no attention is given to the child, even when parent is within a suitable distance for interacting. In the minimal instances of involvement, the parent's behaviors are simple, mechanical, stereotyped, repetitive and perfunctory. The parent is clearly not emotionally involved with the child and appears to be "just going through the motions."

II. SCALES FOR CHILD'S BEHAVIOR:

A. Child Engagement of Parent:

This scale reflects the extent to which the child (a) shows, initiates, and/or maintains interaction with the parent and (b) communicates positive regard and/or positive affect to the parent.

At the higher end of the scale, the child shares a “bout” of sustained positive expression with parent (a “bout” is defined as reciprocated sharing of emotion between the child and parent) and the child is socially and affectively connected to the parent.

Indicators of Child Engagement:

- Approaching or orienting toward parent
- Looking at, establishing, and/or maintaining eye contact with the parent
- Positively responding to parent's play initiations or suggestions (e.g., imitating parent, accepting toy from parent, following parent's direction)
- Directing or (at a higher level) sharing positive expressions with parent
- Engaging parent in play or sustaining play initiated by parent (e.g. offering an object, requesting help, turn-taking)

Indicators of Child Disengagement:

- No sharing of affect with parent
- Overt reject of parent's play overtures
- Pushing offered objects away
- Positioning or orienting away from the parent
- Engaging in self-occupied play which excludes the parent
- Ignoring suggestions from parent

The focus of this scale is on the *quantity* (frequency) of occurrences in which the child shares positive affect with parent (i.e., looking at parent, making eye contact and smiling, and other “approach” behaviors). When scoring this scale, keep in mind that the *quality* (intensity) of expression is secondary to the *quantity* of occurrences.

Child Engagement Scale:

1. **Very Low Engagement.** The child clearly does not attempt to share experiences with parent. Failure to make eye contact with parent when expressing happiness, directing expressions of happiness to the experimenter rather than to the parent, and similar behaviors can be used as evidence that the child attempts little sharing of feelings with parent.
2. **Low Engagement.** The child has very minor incidents which seem expressive of positive regard toward parent and from which one might infer that some positive feelings are expressed toward her. However, the child largely shows no positive regard toward parent and rarely responds to parent or attempts to engage or sustain play with him/her.
3. **Moderately Low Engagement.** The child shows some positive regard and some attempts to engage but they are few, brief and/or mixed in quality. Possibly, the child seems ambivalent in such expressions.
4. **Moderate Engagement.** The child shares some happy expressions with parent and/or makes some attempt to engage or sustain play with parent, but these are only minor elements of interaction and are not sustained by the child for more than a moment at a time. Likewise, the child may include parent in play (offer a toy, imitate pretend, etc.), but the play is not sustained for very long. Thus, behaviors indicative of engagement may be expressed repeatedly and/or clearly, but do not reflect a 'bout' of the child sharing his/her affect and/or sustaining play with the parent.
5. **Moderately High Engagement.** The child has one or more periods in which s/he sustains engagement of parent by expressing positive regard, sharing happy expressions, or sustaining play with the parent. The child seems to maintain positive regard toward parent sufficiently to allow a 'bout' of shared positive expressions and/or play with parent.
6. **High Engagement.** The child is expressive, warm, and engaging of the parent for at least one substantial period of the session. This pattern is of long duration, although it may not occur again if the parent and the child begin having problems. The existence of a 'bout' of sustained positive expression between the child and parent is quite clear in that: (a) the duration of such interaction is at least a couple of minutes, and (b) there is no ambivalence in the child's expression of feelings toward the parent.
7. **Very High Engagement.** The child demonstrates a very positive, engaging and sharing relationship toward the parent for a substantial period of the session. Sustained play is accompanied by positive regard toward the parent. The child is consistently engaging of parent and the child's relationship with parent seems very warm and positive for a major portion of the session.

B. Child's Sustained Attention:

This scale assesses the child's sustained involvement with objects.

Indicators of Child's Sustained Attention:

- The child 'focuses in' when playing with an object
- The child may coordinate activities with several objects (e.g., cooking with the spoon, pot and stove)
- The child explores different aspects of a toy
- The child's attention does not jump from one thing to another quickly
- The child spends more than a minimal amount of time focusing on the object or on a given feature of the toy

In contrast, the child who explores objects in a random, non-focused manner (e.g. touching one feature of a toy after another, only briefly focusing on each feature) would not receive a high score for sustained attention. An child low on sustained attention may appear apathetic, bored, distracted, distressed or aimless.

The focus of this scale is primarily *quantitative*. Ratings are based mainly on the duration of interactions with objects and the overall amount of time spent involved with objects. *Quality* is a consideration in assessing the extent to which the child is involved or 'disorganized' in his/her attention to objects.

Child's Sustained Attention Scale:

1. **Very Low Attention.** The child displays no sustained attention with objects. The child moves from one thing to another in a non-systematic way, without seeming to focus on what the objects have to offer.
2. **Low Attention.** The child shows only a few brief moments of sustained attention. During most of the interaction the child is clearly not involved with the toys.
3. **Moderately Low Attention.** The child is able to sustain attention with objects for brief periods of time, or for a very limited portion of the session. The child may attend to toys, but in a scattered (non-focused) manner.
4. **Moderate Attention.** The child displays sustained attention for about half of the session. The child may be distracted at times (e.g., looking around for period of time or leaving the play area for a brief moment), but the distraction is separated by short periods of involvement with the toys.
5. **Moderately High Attention.** The child spends sustained periods of time involved with the toys. There are some periods of extended, focused attention, though they may be separated by brief periods of distraction. The child is clearly involved with at least two of the toys or for slightly more than half of the session.
6. **High Attention.** The child displays sustained periods of attention for most of the session. There may be a few distractions, but they are brief and immediately followed by focused attention on the toys.
7. **Very High Attention.** The child is clearly involved, interested and focused for almost all of the session. The child is rarely distracted and displays extended periods of sustained attention. He/she may show sustained attention with all of the toys or a prolonged period of focused attention with one or two of the toys.

C. Child Negativity Toward Parent:

This scale measures the degree to which the child shows anger, hostility, or dislike toward parent. At the high end, the child is repeatedly and overtly angry with parent (e.g., forcefully rejecting parent's ideas or showing angry and resistant expressions). *It is important to note* that at this age, the child may express negativity toward parent by hitting an object, the floor, or him/herself, pushing the parent away, or throwing a toy that the parent gives. Likewise, a child at this age may use a negative expression to communicate that s/he wants or does not want something. For these reasons, it is important to note the context of the negative expression in order to determine the extent to which it is directed toward the parent.

For the lowest rating, there are neither overt nor covert signs of such anger. Expressions are essentially positive toward parent whether or not the child is compliant or much involved with her/him. Low ratings may include brief instances of frustration or rejection of the parent's help. The focus of this scale is primarily *quantitative*. Ratings are based mainly on the occurrence of negative behavior. Assessments of *quality* come in when considering the intensity of the negative behavior(s).

Child Negativity Scale:

1. **Very Low Negativity.** Child shows no signs of negativity toward parent. The session is characterized by consistent, positive interactions with parent, indicating that the child is having a truly positive interaction with her/him.
2. **Low Negativity.** Child shows no overt indications of negativity toward parent, but the tone at times may indicate frustration with parent (i.e., fussing, mild protesting). The child may briefly or mildly protest an action, but it does not clearly indicate anger toward parent.
3. **Moderately Low Negativity.** Child displays negativity toward parent only briefly in an overt fashion, but these suggest some anger and resistance in the child's interactions with parent.
4. **Moderate Negativity.** Child shows overt negativity toward parent on several occasions or on one significant occasion, but these are rather isolated episodes, separated by periods in which the child behaves positively or contentedly toward parent.
5. **Moderately High Negativity.** Child frequently displays negativity or displays a few instances of strong or intense negativity which suggest clear anger or resistance in the child's interactions with the parent, but these are not predominant in the interactions.
6. **High Negativity.** Child's negativity toward parent is a predominant aspect of his/her interactions with parent, but it is shown in more sporadic and less intense ways than it is for a child rated "7."
7. **Very High Negativity.** Child is repeatedly and overtly negative, angry and/or resistant toward parent. The child's negativity seems so strong that it pervades the interaction.

III. DYADIC SCALE

Mutuality/Connectedness

This scale measures the degree to which the parent and the child's interaction is characterized by synchrony, comfort, and mutual pleasure. In a dyad high on mutuality/connectedness, the parent and the child appear to share perspectives, energy levels, and affective states.

This scale differs from the other scales in that it measures the child and parent as a unit. At the higher end of this scale, the dyad functions in a consistently cohesive manner. Parent and child seem to enjoy each other thoroughly and there are few or no ambivalent or anxious behaviors in the interaction. The parent is comfortable in her/his role and is able to anticipate or gauge the child's cues. Note that energy or activity level is not a determining factor in this scale. For example, both a high-energy dyad and a relatively calm dyad could be given high scores as long as they seem "in sync" throughout the interaction. If the energy level of the dyad seems "mismatched," however (i.e., a calm child with a hyper parent), the dyad would not be considered "in sync."

Low scores characterize a dyad that seems to operate as two separate entities. Goals are not shared and neither child nor parent acts to please the other. The child may behave in a confused manner, unsure of, unaware of, or anxious about what is going on, and unable to seek or find comfort in the parent. Or, the parent may seem oblivious to the cues of the child and/or react inappropriately to these cues.

At the middle range of this scale, the dyad may seem content with one another, yet experience periods of disconnection or appear uneven or "out of sync." In an uneven dyad, the parent may initiate play strategies that the child consistently rejects. Or, the child may attempt to engage a non-responding parent.

Indicators of Mutuality/Connectedness:

- Pleasure and comfort in being with each other
- Matching of energy and affect levels throughout the interaction
- Synchrony of flow in the interaction (i.e., shared perspectives and goals, easy give-and-take in behavioral and vocal interactions)
- Parental or child behaviors indicating a desire to please the other
- Parental acknowledgment of distress and attempts to relieve it
- Shared eye contact

Indicators of Lack of Mutuality or Disconnection:

- Parent ignoring or trivializing the child's distress
- Child turning away from parent to seek comfort from something or someone other than parent
- Child not responding to parental overtures
- Little or no behavioral and/or vocal turn-taking
- Conflicting goals for play
- Lack of eye contact

- Little or no physical contact
- Not facing or orienting toward one another

Ratings of this scale are made according to both *quantitative* and *qualitative* aspects of the interaction. Ratings are based on the duration (quantity) of time that the dyad appears connected and on the *quality* of their connectedness.

Dyadic Mutuality/Connectedness Scale:

1. **Very Low Connectedness.** The interaction between the child and parent is reminiscent of “ships passing in the night.” There is a sense of little affective investment and little involvement with one another. There is a remoteness between the parent and the child, and a distinct lack of connection.
2. **Low Connectedness.** Dyad displays almost no signs of connectedness. Only a few brief instances of connected behavior are observed, and these are fleeting and/or ambivalent in nature.
3. **Moderately Low Connectedness.** Dyad is more disconnected than connected throughout the session. Although there may be periods of connection, these are generally followed by longer periods of disconnection.
4. **Moderate Connectedness.** Dyad displays a mix of connected and disconnected behavior. One person may convey a sense of closeness, but the other does not. Or, dyad displays conflicted goals and/or disconnectedness as much as connectedness.
5. **Moderately High Connectedness.** Dyad is more connected than not throughout the session. Some markers of disconnection may be seen, but these are generally followed by periods of connection.
6. **High Connectedness.** Dyad displays connectedness throughout the session. Dyad seems comfortable with one another, although there may be one or two brief instances of disconnection.
7. **Very High Connectedness.** Dyad is closely connected. Affect levels and dyad goals are matched. There are no markers of disconnection. As a whole, the interaction between the child and parent is characterized by intimacy, smoothness, comfort, and connectedness. There is a sense of familiarity and genuine closeness between the child and parent.

IV. REFERENCES

Brooks-Gunn, J., Liaw, F., Michael, A., & Zamsky, E. (1992). *Manual for Coding Freeplay - Parenting Styles*. Newark Observational Study of the Teenage Parent Demonstration Project. New York: National Center for Children and Families, Teachers College, Columbia University.

Chase-Lansdale, P. L., Gordon, R. A., Coley, R. L., Wakschlag, L. S., & Brooks-Gunn, J. (1999). Young African American multigenerational families in poverty: The contexts, exchanges and processes of their lives. In E. M. Hetherington (Ed.), *Coping with divorce, single parenting and remarriage: A risk and resilience perspective* (pp. 165-191). Mahwah, NJ: Erlbaum.

Chase-Lansdale, P. L., Brooks-Gunn, J., & Zamsky, E. S. (1994). Young African-American multigenerational families in poverty: Quality of mothering and grandmothering. *Child Development, 65*, 373-393.

Owen, M., Norris, C., Houssan, M., Wetzel, S., Mason, J., & Ohba, C. (1993). *24-Month Mother-Child Interaction Rating Scales for the Three Boxes Procedure*. Dallas, TX: NICHD Study of Early Child Care Research Consortium.

Spiker, D., Ferguson, J., & Brooks-Gunn, J. (1993). Enhancing maternal interactive behavior and child social competence in low birth weight, premature infants. *Child Development, 64*, 754-768.

V. ACKNOWLEDGMENTS

The development of the coding scales and all supporting documents, the training of coders, and the coding of videotapes was conducted under the leadership of Jeanne Brooks-Gunn at the National Center for Children and Families, Teachers College, Columbia University. We thank the Administration on Children, Youth & Families, Mathematica Policy Research, Inc., the National Institute of Child Health and Human Development (NICHD), and the Ford Foundation for their support. We also thank the Virginia and Leonard Marx Foundation, the NICHD Research Network on Child and Family Well-Being, and the National Institute of Mental Health - Administration on Children and Youth, Head Start Consortium for their support of the National Center for Children and Families.

We thank the NICHD Early Child Care Research Network (ECCRN) for assisting with the development of the coding system and the use of the Three-Bag technique (termed “Three Box” in their study). We also thank Anne Ware, a member of the NICHD ECCRN, for her assistance and training in the NICHD Three Box scales. We thank the scholars working on the Teenage Parent Demonstration Program, the Infant Health and Development Program, and the Baltimore Study for additional insights regarding our coding scale development.

We also thank the families who participated in the Early Head Start Research and Evaluation Project, the local researchers and individuals who tirelessly visited families, and the Early Head Start Research Consortium. The national Early Head Start Research and Evaluation Project was funded by the Administration for Children and Families (ACF), U.S. Department of Health and Human Services under contract 105-95-1936 to Mathematica Policy Research, Princeton, NJ, and Columbia University’s National Center for Children and Families, Teachers College, in conjunction with the Early Head Start Research Consortium. The Consortium consists of representatives from 17 programs participating in the evaluation, 15 local research teams, the evaluation contractors, and ACF. Research institutions in the Consortium (and principal researchers for conducting this research through 36 months of age) include ACF (R. Chazan-Cohen, J. Jerald, E. Kresh, and H. Raikes); Catholic University of America (M. Farber, H. Liebow, N. Taylor, E. Timberlake, and S. Wall); Columbia University (L. Berlin, C. Brady-Smith, J. Brooks-Gunn, and A. S. Fuligni); Harvard University (C. Ayoub, B. A. Pan, and C. Snow); Iowa State University (D. Draper, G. Luze, S. McBride, C. Peterson); Mathematica Policy Research (K. Boller, J. Constantine, E. E. Kisker, J. M. Love, D. Paulsell, C. Ross, P. Schochet, S. Sprachman, L. B. Tarullo, C. Vogel, and W. van Kammen); Medical University of South Carolina (R. Faldowski, G. Hong, and S. Pickrel); Michigan State University (H. Fitzgerald, T. Reischl, and R. Schiffman); New York University (M. Spellmann and C. Tamis-LeMonda); University of Arkansas (R. Bradley, R. Clubb, A. Hart, M. Swanson, and L. Whiteside-Mansell); University of California, Los Angeles (C. Howes and C. Hamilton); University of Colorado Health Sciences Center (R. Emde, J. Korfmacher, J. Robinson, P. Spicer, and N. Watt); University of Kansas (J. Atwater, J. Carta; and J. Summers); University of Missouri-Columbia (M. Fine, J. Ispa, and K. Thornburg); University of Pittsburgh (B. Green, C. McAllister, and R. McCall); University of Washington School of Education (E. Armijo and J. Stowitschek); University of Washington School of Nursing (K. Barnard and S. Spieker), and Utah State University (L. Boyce, G. Cook, C. Callow-Heusser, and L. Roggman).

